

MARINER NEWS

TO: Service Departments
FROM: Walter E. Kaelin, V.P. Engineering
DATE: February 9, 1978
SUBJECT: Mariner 70, Field Adjustments

took file

Enclosed is the servicing information for the Mariner 70. For your convenience, we show test points and adjustment locations. Also shown are the microphone, PTT and audio output to permit the hook-up of the H177 handset.

BAYTRONICS
CORPORATION

FEB 10 REC'D

OAKLAND, CALIF.
REC'D. ON ABOVE DATE

212

intech mariner 70

SYNTHESIZED VHF/FM MARINE RADIOTELEPHONE

FEATURES

- Digital synthesized Phase Lock Loop circuitry provides full coverage on all U.S.A. and International maritime channels. No need to ever add or change a crystal when cruising into new areas.
- Selected channels indicated by easy to read, BRIGHT LED digital display.
- Full 25 watt output power with protective circuitry to prevent damage when operating into faulty antenna systems.
- Quick push button access to Coast Guard monitored distress channel 16.
- Equipped to receive all 4 U.S. and Canadian weather channels.
- Front panel LED transmit light indicates RF power to antenna when transmitting.
- Receiver selectivity provides clear reception even in congested areas.
- Built-in connector for optional remote speaker.
- Versatile mounting bracket allows easy removal and storage.
- Designed and built with industrial grade materials to withstand the tough marine environment.
- Type accepted FCC Part 83.
- Meets or exceeds Canadian RSS182 specifications.
- You can't buy a better radiotelephone to save your life! Ask your independent Intech Marine Dealer for more details.



GENERAL

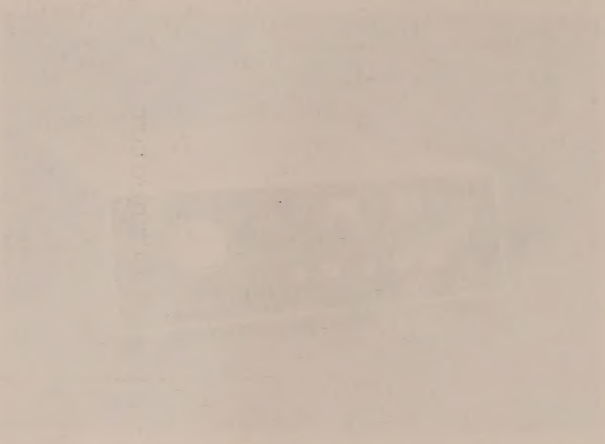
Frequency Range 156 to 162.55MHz
Channel Spacing 25KHz
Power Supply 13.6V DC \pm 15%
negative ground
Operating Temperature Range . -20°C to +50°C
RF Impedance 50 OHMS
Shock, Vibration . . . EIA RS 152A/ RS 204A
Size 2.6"H x 7"W x 10.5"D
(65mmH x 180mmW x 265mmD,)
Weight 6 lbs (2.6kg)

TRANSMITTER

Power Output 25/1W
Frequency Stability 10ppm
Deviation \pm 5KHz
Spurious & Harmonics >70dB
below carrier
Current Drain @ 25 watts <6A
Duty Cycle continuous
Number of Channels 55

RECEIVER

Sensitivity <0.3 μ V for 12dB SINAD
<0.5 μ V for 20dB quieting
Squelch Threshold <0.3 μ V
Adjacent Channel Rejection >70dB
Spurious Rejection >70dB
Audio Power 4 Watts @ 10% distortion
Current Drain Receive Standby <0.5A
Number of Channels 76



3.1. Theoretical Framework

3.2. Methodology

3.3. Results

3.4. Discussion

3.5. Conclusion

3.6. References

3.7. Appendix

3.8. Bibliography

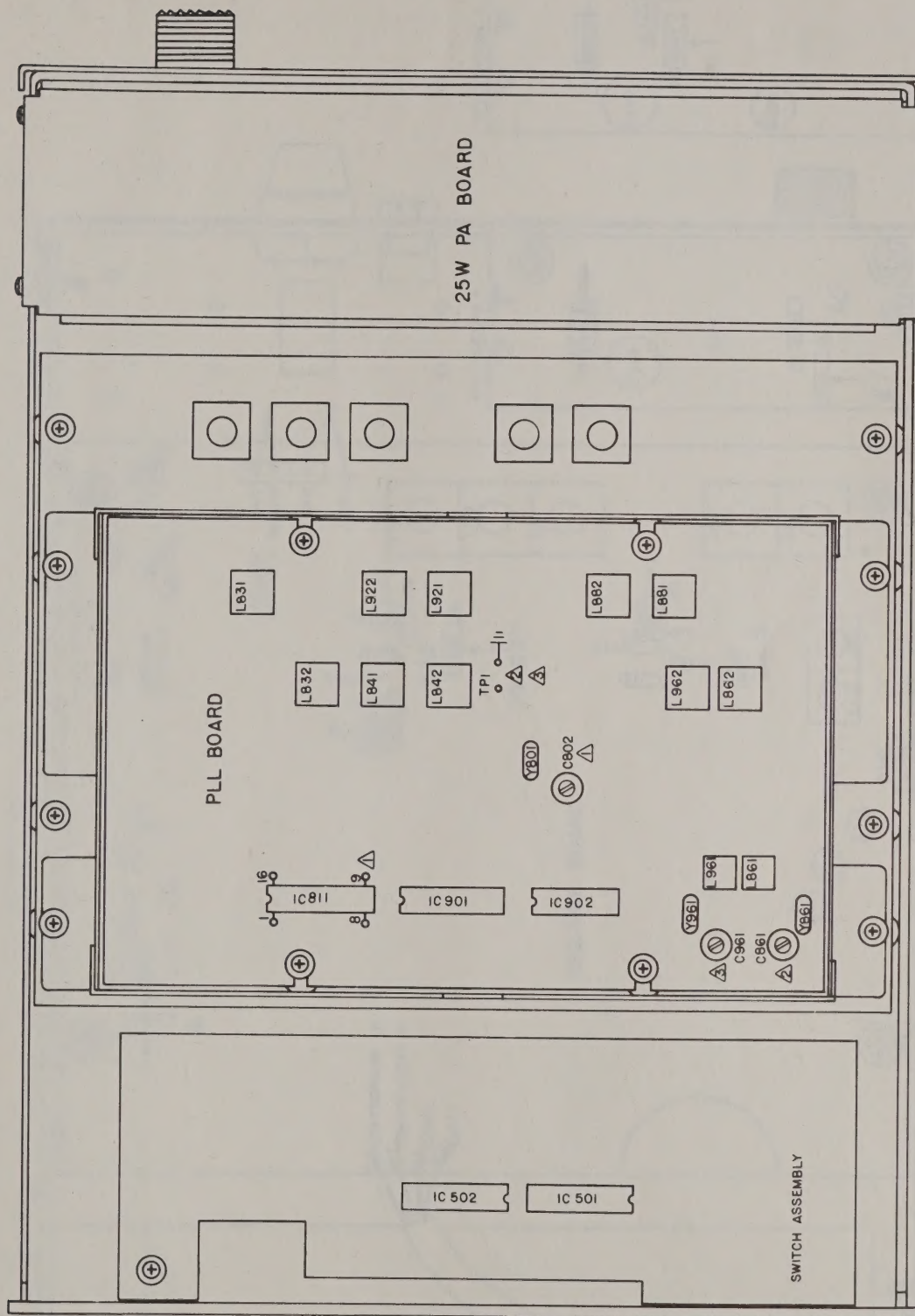
3.9. Glossary

3.10. Index

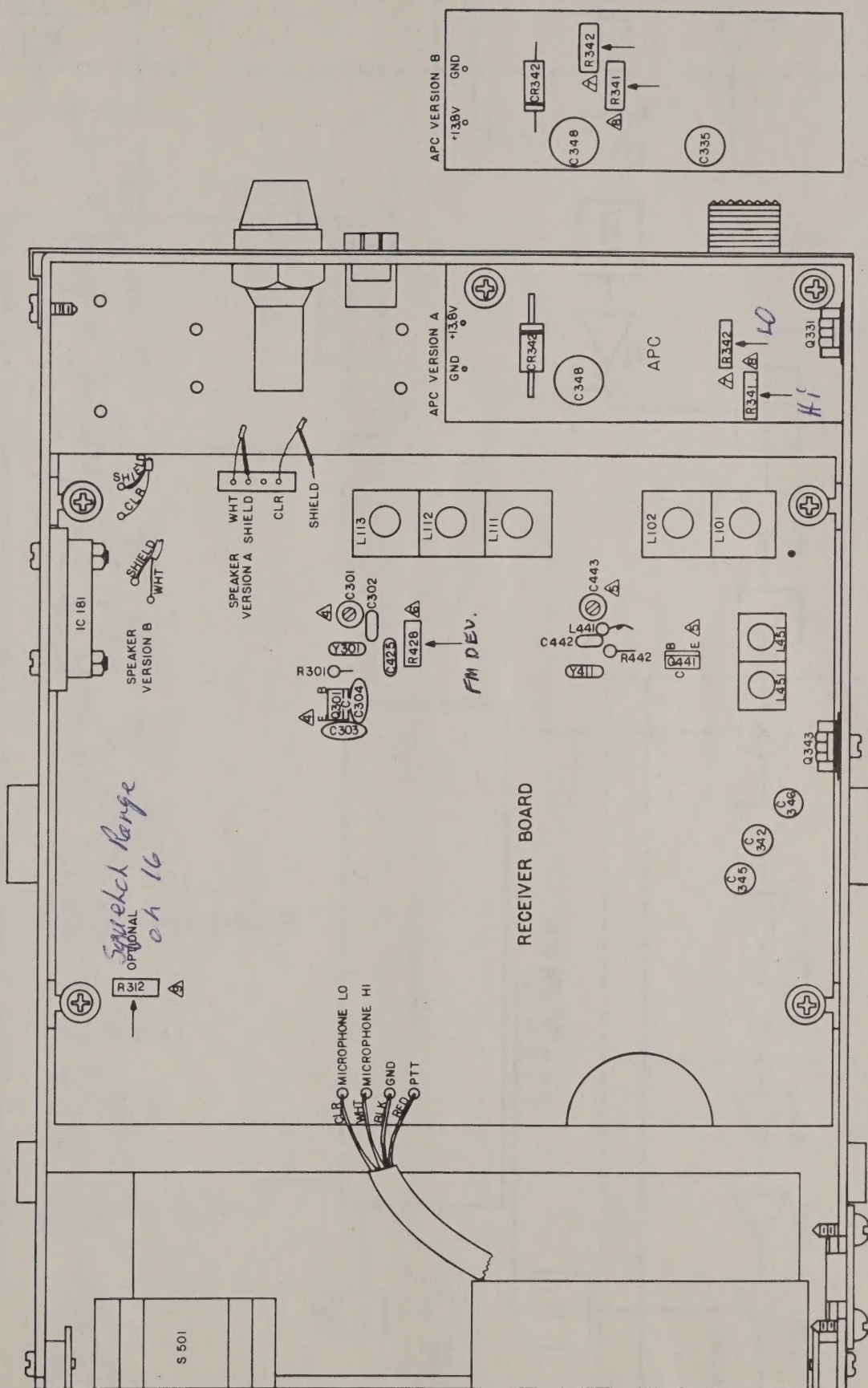
MARINER 70 ADJUSTMENTS

A 1.24.78

Adjust- ment Δ	Setting of, Transceiver Mode	Adjusted with	Set to	Pick up point Δ	Signal level
1	Reference crystal Y801 Receive channel 16	C802	10.00000MHz $\pm 100\text{Hz}$	IC 811 MCL4568 pin 9	8V pp (10:1 probe)
2	Rx simplex crystal Y861 Receive channel 16	C861	135.40000MHz $\pm 300\text{Hz}$	Tp1 L842	+2 to +5dBm 50 ohm
3	Rx duplex crystal Y961 Receive W2	C961	141.00000MHz $\pm 300\text{Hz}$	Tp1 L842	+2 to +5dBm 50 ohm
4	2nd L.O. crystal Y301 Receive W2	C301	20.94500MHz $\pm 100\text{Hz}$	Emmitter Q301	2.5V pp (10:1 probe)
5	Tx offset crystal Y411 Low power Tx	C443	$\pm 300\text{Hz}$ of final frequency	Antenna Connector	1 watt
6	Deviation Low power Tx	R428	$\pm 5\text{kHz}$	Antenna Connector	1 watt
7	RF Power, Lo Tx @13.6V DC	R336/R342	0.75 to 1W RF	Antenna Connector	---
8	RF Power, Hi Tx @13.6V DC	R337/R341	23 to 25W RF	Antenna Connector	---
9	Squelch range Receive channel 16	R312	2 μV RF tight squelch unmodulated	Loudspeaker	---



MARINER 70
TOP VIEW
REV. A 1-24-78



MARINER 70
BOTTOM VIEW
REV. A 1-24-78

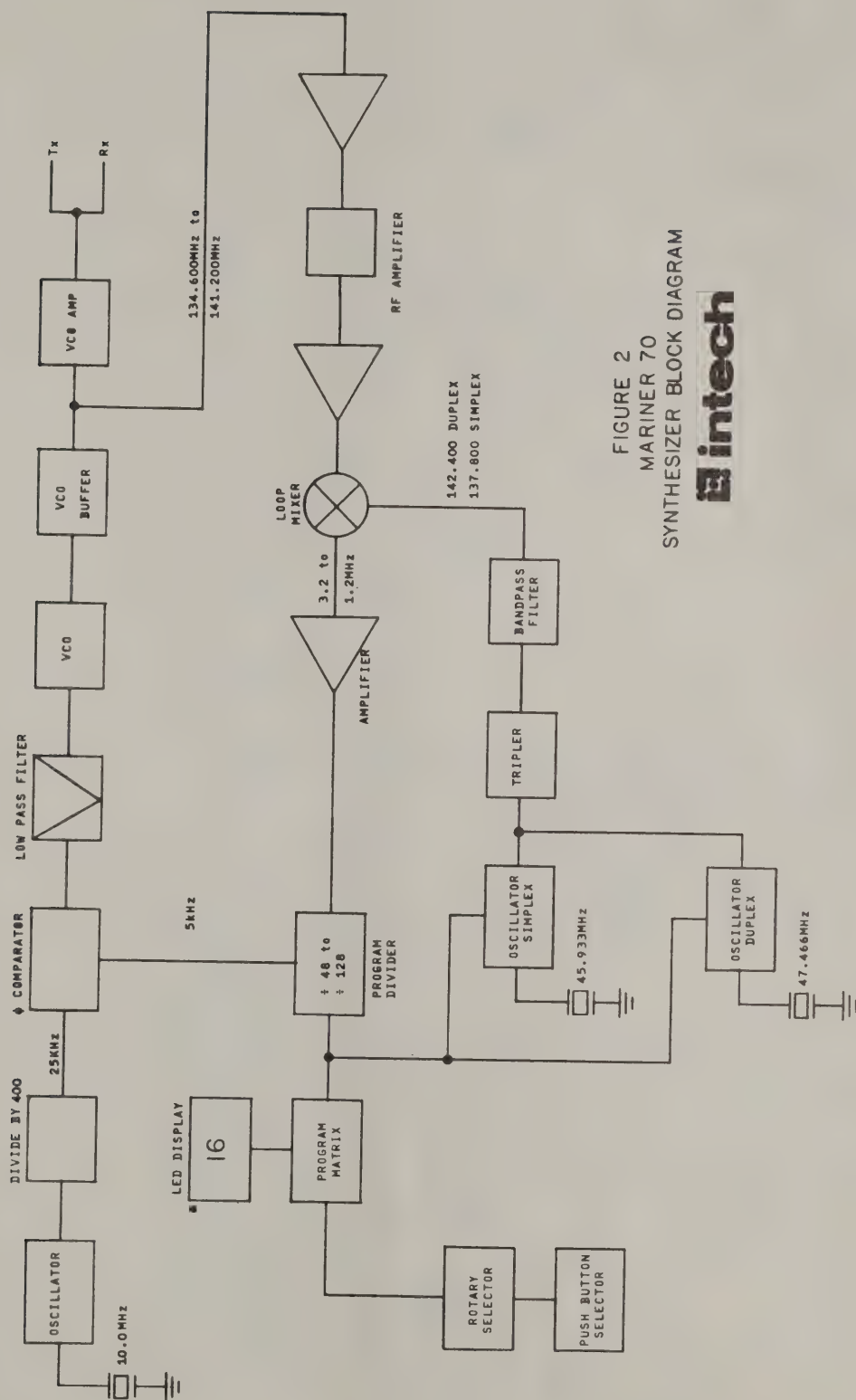
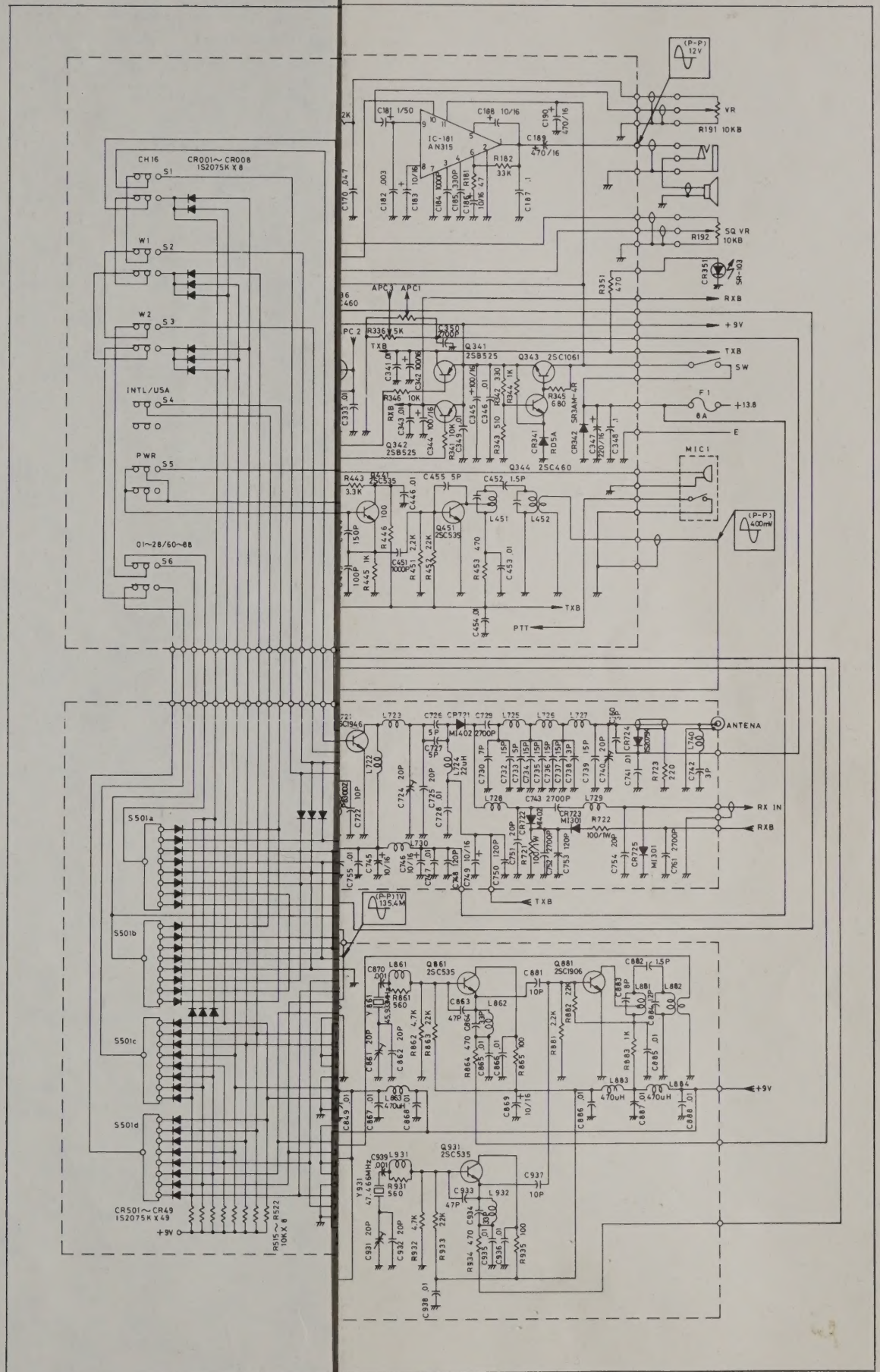


FIGURE 2
MARINER 70
SYNTHESIZER BLOCK DIAGRAM

intech



SCHEMATIC DIAGRAM

